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10/569,153	02/21/2006	Raymond Krasinski	US 030277	1693

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EXAMINER
BITAR, NANCY

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2006*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 February 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *2/21/2006*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Drawings

1.   The drawings are objected to because figures 1-4 do not comply with 37 CFR 1.84(o)

where suitable descriptive legends may be used subject to approval by Office, or may be

required by the examiner where necessary for understanding of the drawing. They should contain

as few words as possible

Examiner Notes

2.   Examiner cites particular columns and line numbers in the references as applied to the

claims below for the convenience of the applicant. Although the specified citations are

representative of the teachings in the art and are applied to the specific limitations within the

individual claim, other passages and figures may apply as well. It is respectfully requested that,

in preparing responses, the applicant fully consider the references in entirety as potentially

teaching all or part of the claimed invention, as well as the context of the passage as taught by

the prior art or disclosed by the examiner

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1, 2-6 ,10-20 are rejected under 35 U.S.C. 102(b) as being anticipated by

Hartung et al "Spread Spectrum Watermarking Malicious Attacks and Counterattacks"

As to claims 1 and 19, Hartung et al teaches detecting a watermark in content (watermark

retrieval, section 4), comprising the steps of:

utilizing only a subset of candidate counter watermark detection techniques for

each time interval from a set of available counter watermark detection

techniques from a set of available counter watermark detection techniques

 (in order to counter possible watermark attacks , The attacked image is divided into blocks of

arbitrary size as shown in Fig 5 for each of the blocks all possible combinations of shift, rotation,

zoom etc) collectively referred to as modifications are

applied as illustrated in Fig 6 and the correlation between the modified block and the original

pseudo noise signal is calculated, section 4.4.1., lines 10-12; note that the combination of a

particular shift, rotation, and zoom together with the correlation detector is interpreted as a

counter watermark detection technique; (section 4.4.1, lines 21-23) . Hartung et al teaches from

the total of 3.78 million combinations, only a smaller search space was used to detect an attacked

watermark, therefore, a subset of all the possible techniques was used for each interval.

Furthermore, Hartung et al teaches in section 4.4.1 line 24 that the modifications are applied in

blocks which are temporarily neighbors which imply that a time interval is present.) .; and

searching for a watermark utilizing one or more of said subset of candidate counter watermark

detection techniques (section 4.4.1, lines 13-14; where a search is done to find the highest

correlation)

As to claims 2 and 4, Hartung et al teaches the method of claim 1, wherein only a

second subset of said available counter watermark detection techniques is implemented in a

given watermark detector and wherein said first and second subsets of said pool of counter

watermark detection techniques are the same (the total of 3.78 million combinations, only a

smaller search space was used to detect an attacked watermark, therefore, a subset of all the

possible techniques was used for each interval) section 4.4.1, lines 21-24; note that the second

subset is interpreted as the same subset of claim 1) .

As to claim 3, Hartung et al teaches the method of claim 1, wherein a given watermark

detector is provided said subset of available counter watermark detection techniques from a

larger pool of available counter watermark detection techniques (section 4.4.1, line 26, small

percentage(subset) is used ; figure 5).

The limitation of claims 5, 11-17 and 20 has been addressed in claim 1 except for the

limitation "randomly selecting a particular counter watermark detection technique. It is obvious

to one skilled in the art to use the randomly selecting or several other techniques in order to solve

the problem of reducing the large search space taught by Hartung in order to make the

implementation faster.

As to claim 6, Hartung et al teaches the method of claim 1, wherein said steps are

repeated until a watermark is detected or all counter watermark detection techniques have been

executed (section 4.4.1, lines 11-12; it is disclosed that all possible combinations (interpreted as

"counter watermark detection technique" are applied).

As to claim 10, Hartung et al teaches the method of claim 1, further comprising the step

of restarting said search for a watermark at a beginning of each of said time intervals (section

4.4.1; note that the search performed by the disclosed method has to be restarted at the

beginning of each frame(time interval)).

As to claims 14-15 , Hartung et al teaches the method of claim 13, wherein only a subset of said available counter watermark detection techniques is implemented in a given watermark detector and wherein a given watermark detector is provided a

subset of available counter watermark detection techniques from a larger pool

of available counter watermark detection techniques (3.78 million combinations (pool of available counter watermark detection techniques; the search space is often much smaller since reasonable attacks cannot change the size and orientation of images too much, section 4.4.1, lines 22-28).

As to claim 16, Hartung et al teaches the method of claim 13, wherein said set of counter watermark detection techniques is selected randomly from all available counter watermark detection techniques (all available counter watermark ; Fig 5 for each of the blocks all possible combinations of shift, rotation, zoom etc) collectively referred to as modifications are applied as illustrated in Fig 6 and the correlation between the modified block and the original pseudo noise signal is calculated, section 4.4.1., lines 10-12)

As to claim 18, Hartung et al teaches the method of claim 13, wherein said steps are repeated until a watermark is detected or all counter watermark detection techniques have been executed (note that this is a one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances without the exercise of inventive skill, in order to solve the problem of detecting a watermark).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al

in view of Caldelli et al " Authorized MPEG-4 video fruition via watermarking recovering and

smart card certification".

While Hartung et al. meets a number of the limitations of the claimed invention, as pointed out

more fully above, Hartung fails to specifically teach "the step of disabling content

access if a corrupted watermark is detected and the step of enabling content

access if a valid watermark is detected and if no watermark has been found after all available

counter watermark detection techniques have been executed".

Specifically, Caldelli et al. teaches the use watermark to implement access rule where On

the client side the FILE.mp4 is decoded according to the MPEG-4 IPMP interface (see figure 4)

and both Video Elementary Streams and IPMP information are extracted. The IPMP Descriptor

allows, through its three fields to understand which kind of medium we are dealing with (first

field) and which IPMP specific system it is needed to extract authorization information (second

field). If the client does not already possess this software (the watermarking detection DLL in

our case), because of previous applications, it can download the library directly from the server

routine database. Now the client is able to read the code embedded in the video content by

providing to the watermarking detection library the video frames and the secret key which is

located in the IPMP DATA field (third field) as it is depicted in the figure 6.After that, a matching operation between the code that has been read through the watermarking DLL (the client smart card code which represents the client) and the code contained in the client smart card will be carried on. If the matching is right, fruition will be authorized, otherwise it will not. Not to affect the playing, the code check can be performed with a sampling time that may be established depending on the particular application, or on the requested security level, or on the number of frame watermarked during the embedding phase (section 3.2). it would have been obvious to one of ordinary skill in the art to use the watermarks to implement access rules to digital content to in Hartung in order to restrict the access of digital media to valid subscribers. Therefore, the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention by applicant.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to NANCY BITAR whose telephone number is (571)270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/
Supervisory Patent Examiner, Art Unit 2624

Nancy Bitar   9/22/2008